

REMARKS

Claims 1 – 14 are currently pending in the present application.

REJECTION UNDER 35 U.S.C. § 103

Claims 1, 2, 6 and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants' Admitted Prior Art (AAPA) in view of U.S. Patent No. 6,501,736 to Smolik et al. and U.S. Patent No. 6,590,928 to Haartsen. Claims 3 – 5 and 7 – 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of Smolik, Haartsen and U.S. Patent No. 6,442,151 to H'mimy et al. Applicants respectfully traverse these rejections

In independent claim 1, for example, Applicants disclose:

1. A wireless terminal device comprising:

a wireless interface part having an interface with a wireless transmission path at a physical layer;

a link forming part accessing the wireless transmission path via the wireless interface unit part and forming a particular link on the wireless transmission path; and

a transmission/reception part transmitting and/or receiving transmission information via the particular link formed by the link forming part,

the wireless transmission path being formed as a physical channel to which a CSMA system is applied, the CSMA system securing a given transmission quality with respect to a total of a number of links concurrently formable and an amount of the transmission information,

the link forming part forming the particular link on the wireless transmission path, the particular link sharing the wireless transmission path with one or more additional links each associated with an additional wireless terminal device, the particular link and the one or more additional links each being formed with an initialization of the wireless transmission path and persisting while the wireless transmission path remains active.

In a Response mailed September 9, 2004 to the Office Action of April 15, 2004,

Applicants made the following arguments:

The Examiner acknowledges that AAPA fails to teach Applicants' claimed wireless transmission path formed as a physical channel to which a CSMA system is applied, and cites Smolik for this purpose. Smolik discloses a system for increasing call capacity in a wireless communication system by adjusting speech transmission rates in order to increase call capacity of CDMA channels (see, e.g., column 1, line 56 – column 2, line 7 and column 2, lines 31 - 38 of Smolik).

In each of independent claims 1 and 6, Applicants claimed invention discloses a link forming part that forms links each corresponding to a wireless terminal device and that are associated in a shared manner with a wireless transmission path (channel). Links for these terminals are formed with initialization of the transmission path, and persist while the path remains active (see, e.g., page 24, lines 3 – 23 of Applicants' specification). In sharp contrast to AAPA, Applicants' claimed approach employing the link forming part enables terminal devices to receive connection-oriented communication services without requiring a dedicated transmission path to be captured for each terminal. As a result, wireless network infrastructure may be reduced over the infrastructure disclosed by AAPA. This distinction of Applicants' claimed invention over AAPA is neither disclosed nor suggested by either of Smolik and H'mimy.

In the present Office Action, the Examiner acknowledges that "AAPA in view of Smolik may not specifically disclose [that] the wireless communication system is CSMA and a plurality of links on a path are formed and persist while the path remains active". The Examiner, however, suggests that these limitations are taught by Haartsen.

Haartsen discloses a wireless communication network including master and slave units, in which communication is according to a virtual frequency hopping channel whose hopping sequence is determiner by the master unit (see, e.g., abstract of Haartsen). For example, as described ad column 11, lines 21 – 46 of Haartsen:

[One] unit is temporarily assigned the role of master whenever a connection is started. This assignment lasts only for the duration of the connection. Unless redefined, the master unit is the unit that initiates the connection. Each unit has a unique address, or access code, by which it is identified. In an exemplary embodiment, the address is 64-bits long, but of course, this need not be the case in every embodiment. The address determines the pseudo-random hop sequence or virtual channel that the unit uses when it is a master. The master, therefore, has to

distribute its address among the slaves so that all use the same virtual hopping channel. During a connection, a very long hop sequence is used in which each hop in the 79 possible hops is visited with equal probability. The phase in the hop sequence is determined by the system clock in the master transceiver unit.

Thus, unlike Applicants' claimed invention, Haartsen fails to teach or otherwise suggest that each link on the wireless transmission path be "formed [by an associated wireless terminal device] with an initialization of the wireless transmission path". Moreover, Haartsen fails to teach or otherwise suggest like Applicants that the formed links "[persist] while the wireless transmission path remains active". Rather, as disclosed at column 11, lines 31 - 36 of Haartsen, one of a plurality of units is temporarily assigned the role of "master" when a connection is started, and this assignment only lasts for the duration of the current connection. In addition, in contrast to Applicants' claimed invention, only the master of Haartsen is engaged in determining a hop sequence (i.e., assigning links) for each of the master and slave units. Significantly, Applicants' claimed device advantageously eliminates the overhead present in the system of Haartsen for re-establishing new links for each subsequent connection.

Accordingly, Applicants submit that independent claim 1 is therefore not made obvious by the combination of cited art, and is therefore allowable. As independent claim 6 essentially shares the limitations of claim 1 relating to the claimed link forming part of the wireless terminal device, Applicants re-apply the above arguments to submit that independent claim 6 is also allowable. As dependent claims 2 - 5 and 7 - 14 each depend from one of allowable claims 1 and 6, Applicants further submit that claims 2 - 5 and 7 - 14 are allowable for at least this reason.

CONCLUSION

An earnest effort has been made to be fully responsive to the Examiner's objections. In view of the above amendments and remarks, it is believed that claims 1 - 14, consisting of independent claims 1 and 6, and the claims dependent therefrom, are in condition for allowance.

Passage of this case to allowance is earnestly solicited. However, if for any reason the Examiner should consider this application not to be in condition for allowance, he is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Respectfully submitted,



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